Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-10 (cancelled).

11. (new) A method of reducing spent oxide nuclear fuel to nuclear-fuel metal, wherein metal oxides are reduced to metals using an electrochemical reduction device with $LiCl-Li_2O$ salt as an electrolyte,

said electrochemical reduction device comprising:

a cathode electrode assembly comprising: a spent oxide nuclear fuel injection part; an outer pipe connected to the spent oxide nuclear fuel injection part at the upper part thereof; a porous magnesia filter connected to the lower part of the outer pipe; a solid electrode extended from the top of the outer pipe to the inside of the magnesia filter and having radial blades positioned at the lower part thereof; and an alumina tube surrounding the solid electrode except the radial blades positioned at the lower part of the solid electrode;

a plurality of anodes located on circle around the cathode electrode assembly while being spaced apart from each other at predetermined regular intervals;

a reference electrode located on the same circle as the anodes and positioned at the middle of two adjacent anodes;

an electrolyte injection part for injecting an electrolyte into the reduction device;

a $LiCl-Li_2O$ salt injected through the electrolyte injection part into the reduction device; and

a reactor receiving the cathode electrode assembly, the anodes, the reference electrode, and the $LiCl-Li_2O$ molten salt.

12. (new) The method as set forth in claim 11, wherein the method comprising:

Li_2O contained in the $LiCl$-Li_2O molten salt is electrolyzed into the Li metal and oxygen gas; and

the Li metal reacts with the metal oxide to produce Li_2O and the metal.

13. (new) The method as set forth in claim 12, wherein the spent oxide nuclear fuel is reduced at the temperature of 600 to 700°C and the potential of -2.592 V or higher.

14. (new) The method as set forth in claim 11, wherein the method comprising:

Li_2O contained in the $LiCl$-Li_2O molten salt is electrolyzed into the Li and oxygen ions; the Li ion produced reacts with the metal oxide to produce metallic Lithium; and

the metallic Lithium is electrolyzed under condition of excess Li metal ions to produce metal and oxygen ions.

15. (new) The method as set forth in claim 14, wherein the spent oxide nuclear fuel is reduced at the temperature of 600 to 700°C and the potential of -2.592 V or lower.

16. (new) The method as set forth in claim 11, wherein the cathode electrode assembly comprising: a spent oxide nuclear fuel injection part; an outer pipe connected to the spent oxide nuclear fuel injection part at the upper part thereof; a porous magnesia filter connected to the lower part of the outer pipe; a solid electrode extended from the top of the outer pipe to the inside of the magnesia filter and having radial blades positioned at the lower part thereof; and an alumina tube surrounding the solid electrode except the radial blades positioned at the lower part of the solid electrode.

17. (new) The method as set forth in claim 16, wherein the porous magnesia filter has pores with an average diameter of 5 to 10 μm.

18. (new) The method as set forth in claim 16, wherein the porous magnesia filter is made of magnesium oxide.

19. (new) The method as set forth in claim 11, wherein the removable cathode electrode assembly is installed in the reduction device.

20. (new) The method as set forth in claim 11, wherein each of the anodes is ceramic oxide selected from the group consisting of Fe_3O_4, SnO, and NiO.

21. (new) The method as set forth in claim 11, wherein the reactor has a dual structure comprising an inner reaction vessel and an outer reaction vessel, and an alumina crucible is inserted between the inner reaction vessel and outer reaction vessel.